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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,337	01/05/2001	Yu-Lin Chen	510553.92217	3946

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EXAMINER

CHANEY, CAROL DIANE

ART UNIT	PAPER NUMBER
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1745

14

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/755,337

Applicant(s)

CHEN, YU-LIN

Examiner

Carol Chaney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39-76 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39-76 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 39-76 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen, US Patent 5,858,575 for reasons of record. The rejection is repeated below for convenience.

Chen discloses lead-acid battery grids formed by immersing a lead-calcium alloy substrate in a melt of one of tin, lead-antimony, lead-silver and lead-tin alloys. Because the substrate may be dipped into a melt after it has been formed into a grid, substantially all the surfaces of the network/grid will be coated. (Note Chen, column 2, lines 18-19 and column 6, lines 26-30.)

With regards to claim 42, any material, and any coating will be porous in the broadest meaning of the term.

With regards to claims 43-47, Chen teaches specifically that lead-tin alloy coatings having between 0.1 and 20% tin may be used, and coatings having 1 to 20 % by weight antimony and up to 2% by weight tin may be used. (Chen, column 4, lines 36-38 and 62-65.) In a specific example, a coating with a melting point of 590 °F is used. (Column 5, lines 34-35.)

With regards to claims 48-52, Chang discloses Pb-Ca-Sn alloy grids containing 0.08 wt% Ca and 1.5 wt% Sn. (Column 4, lines 46-48.)

With regards to claim 53, the limitation "at least about 0 to about 0.02 weight percent silver" is interpreted to encompass 0 weight percent silver, and thus this limitation is met by the Chang disclosure.

With regards to claim 54, the recitation of "a plurality of apertures *stamped...*" is interpreted as a product by process limitation. Without a showing of criticality, the means by which an aperture is formed is not considered to change the structure of the aperture. The patentability of a product is independent of how it was made. The burden is on applicants to show product differences in product by process claims. See *Ex parte Jungfer* 18 USPQ 1796, 1800 (BPAI 1991); *Brystol-Myers Co. v. U.S. International Trade Commission* 15 USPQ 2d 1258 (Fed. Cir. 1989); *In re Thorpe* 227 USPQ 964 (Fed. Cir. 1985); and *In re Best* 195 USPQ 430 (CCPA 1977).

With regards to claims 55-57, Figures 4 and 5 illustrate the location and orientation of the coatings.

With regards to claims 58-61, Chen specifically teaches lead-tin alloy coatings having between 0.1 and 20% tin may be used, and coatings having 1 to 20 % by weight antimony and up to 2% by weight tin may be used. (Chen, column 4, lines 36-38 and 62-65.) In a specific example, a coating with a melting point of 590 °F is used. (Column 5, lines 34-35.)

With regards to claim 62, Chen illustrates in Figure 1 a frame element with a current collector lug (reference number 10).

With regards to claim 63, Chen discloses grids pasted with active material. (Column 6, lines 32-34.)

With regards to claim 64, figures 2 and 4 illustrate grids with two different transverse cross-sections.

With regards to claims 65-72. Chen discloses battery grids having a substrate with a plurality of wire elements forming spaced apart apertures and frame elements at the top and bottom of the grid. (See Figure 1.) The grid is pasted with active material; obviously the grid wires support the active material. (Column 6, lines 32-34.) The substrate is coated by immersing it in a melt of tin, lead-antimony, lead-silver or lead-tin. (Note Chen, column 2, lines 18-19 and column 6, lines 26-30.) The coating is interpreted as a "means for coating". As shown in Figures 2-5, the grids include planar surfaces having a coating.

With regards to claims 73-76, Chen specifically teaches lead-tin alloy coatings having between 0.1 and 20% tin may be used, and coatings having 1 to 20 % by weight antimony and up to 2% by weight tin may be used. (Chen, column 4, lines 36-38 and 62-65.) In a specific example, a coating with a melting point of 590 °F is used. (Column 5, lines 34-35.)

Response to Arguments

Applicant's arguments filed 07 April 2003 have been fully considered but they are not persuasive. Applicant asserts the prior art of Chang does not disclose a "network comprising a plurality of spaced apart wire elements, each wire element having opposed ends" with "at least a portion of the wire elements having a first transverse cross section taken at a position intermediate the opposed ends of the wire element and

a second transverse cross-section taken at one of the opposed ends of the wire element."

In response, it is noted that Figs 1-3 of the prior art show all of the following claimed features:

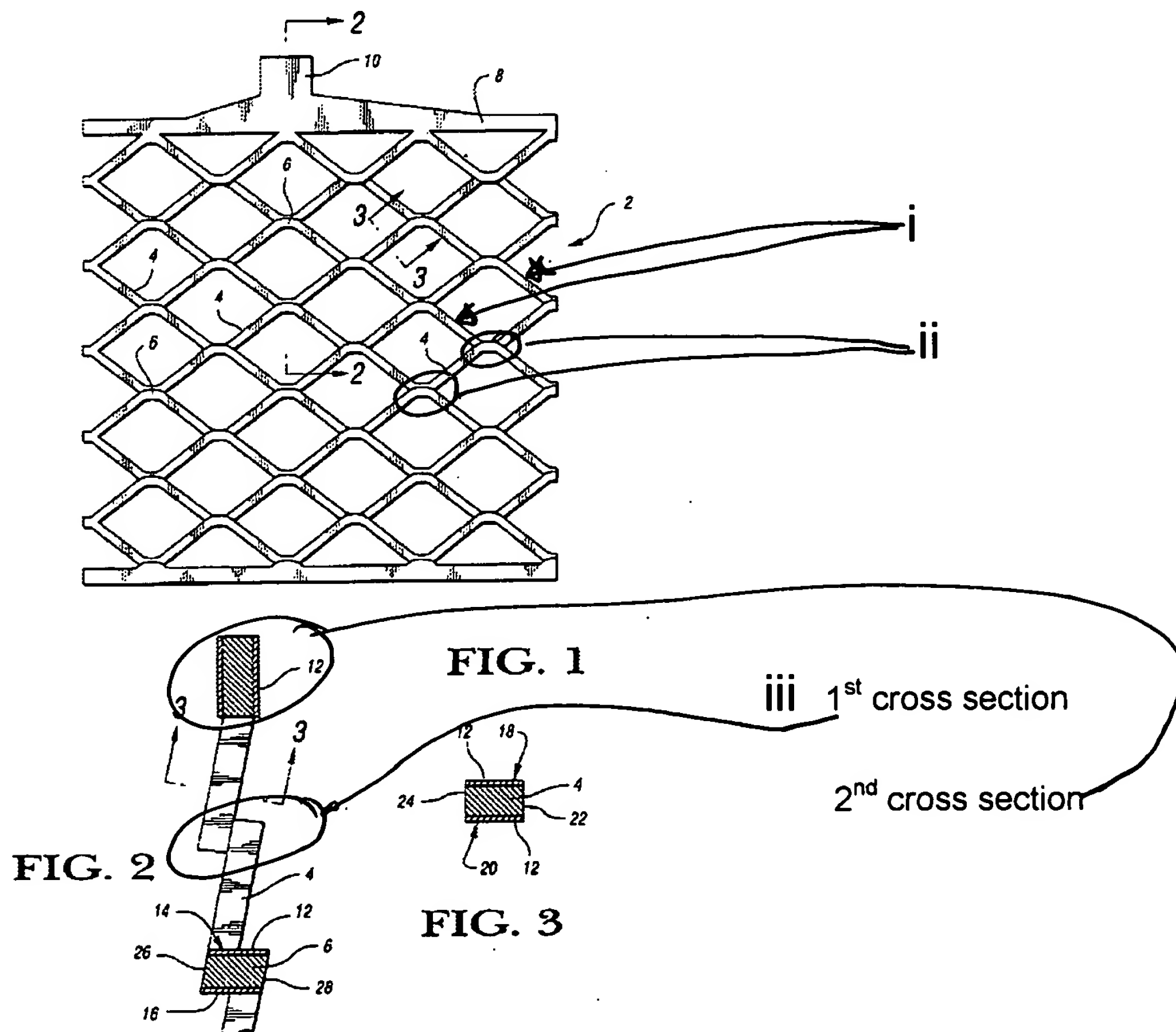
- i) a network comprising a plurality of spaced apart wire elements,
- ii) each wire element having opposed ends
- iii) at least a portion of the wire elements having a first transverse cross section taken at a position intermediate the opposed ends of the wire element and a second transverse cross section taken at one of the opposed ends of the wire element.

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With regards to claims 47, 50, 52, 53, 61, and 76, Applicant asserts the phrase "about" is intended to acknowledge that the claims subject matter would be understood by one of skill in the art to include insubstantial variations from the specific numeric values provided. However, it is noted that the phrase "less than" which is coupled with "about" includes by its nature a considerable range of numeric values. Thus, the insubstantial variations the applicant wishes to claim are unclear. Furthermore, there does not appear to any evidence in the record to show that persons of ordinary skill would uniformly understand the ranges of values covered by "about".

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol Chaney whose telephone number is (703) 305-3777. The examiner can normally be reached on Mon - Fri 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 703-308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Carol Chaney
Primary Examiner
Art Unit 1745

cc
June 15, 2003